

CARDIOVASCULAR, PHARMACOLOGY and CHEMISTRY

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Committee:
Dr. Bing, Chmn.
Dr. Cattell
Dr. Wilson

TOBACCO INDUSTRY RESEARCH COMMITTEE
150 East Forty Second Street
New York 17, New York

COMPARE: #33
Activated - 2/1/55
Renewed - 2/1/56
#160
Activated - 8/1/57
#213
Activated - 5/1/59
Renewed - 5/1/60
#301
Activated - 5/1/61

APPLICATION FOR RESEARCH GRANT

DATE: March 9, 1962

1. Name of Investigator: WALTER REDISCH, M. D.
2. Title: EFFECTS OF TOBACCO ON THE HUMAN VASCULAR SYSTEM
3. Institution & Address: NEW YORK UNIVERSITY MEDICAL CENTER
550 First Avenue
New York 16, New York
4. Project or Subject: VASCULAR RESPONSES TO TOBACCO SMOKING IN PATIENTS WITH VASCULAR DISEASE.
5. Detailed Plan of Procedure:
 - (a) It is proposed that the investigation of vascular responses to tobacco smoking measuring blood flow to skin and muscle by segmental plethysmograph be continued in order to ascertain, whether the established correlation between responses in skin flow to smoking and skin sensitivity to intradermal tobacco extract in normal individuals holds true for patients with occlusive arterial disease.
 - (b) It is proposed that the effect of tobacco smoking on blood flow to the orbit of the eye of man be evaluated. The "pulsensor", developed by Dr. Thorner at the University of Pennsylvania's Department of Neurophysiology, has been purchased after a personal visit to Dr. Thorner's laboratory. It has been shown that blood flow to the orbita oculi is well representative of the blood flow at the base of the brain. The machine permits direct writing of pulse-curves with automatic pressure changes and fairly accurate determination of systolic and diastolic pressures in the vasculature of the orbit, separately determined on the right and on the left. Thus the effects of tobacco smoking on a vascular bed representative of a part of the brain blood flow can be studied.
 - (c) It is proposed that the effects of tobacco smoking on minute blood vessels of the skin and mucous membranes be studied with a capillaromicrophotographic apparatus which permits 400 x enlargement. The machine has been

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purchased from other funds available. The current studies with segmental plethysmography will be correlated with the pulsensometer measurements and the minute vessel photography.

6. Budget Plan:

	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>
a. Salaries (1 technician	\$4,400.00	\$4,774.00	\$5,148.00
Employee Fringe Benefits	286.00	334.00	386.00
b. Expendable Supplies	800.00	800.00	800.00
c. Permanent Equipment	none	none	none
d. Overhead	868.00	931.00	995.00
e. Other (travel)	300.00	300.00	300.00
TOTAL	\$6,654.00	\$7,139.00	\$7,629.00

7. Anticipated Duration of Work: **THREE YEARS**

8. New York University Research Service, Goldwater Memorial Hospital, facilities with all apparatus (man plethysmograph, dog-plethysmograph and pulsensometer).

Also New York University Medical, Neurological and Neurosurgical Wards at Bellevue.

STAFF AVAILABLE: Dr. Walter Redisch, Dr. Harbans Singh, Dr. Heinz Wittig, Mr. Edward Messina and Mr. Emmet Clemente.

9. Additional Requirements: Mixed tobacco cigarettes, as currently supplied.

10. Additional information (including relation of work to other projects and other source of supply)

This work will be in part based on the previous work done together with Dr. Marion B. Sulzberger and Dr. Vincent J. Fontana. The investigator is also associate investigator on the extracranial vascular occlusion project (NIH No. HP 7018) at Bellevue Hospital and will be able to correlate the tobacco studies on the pulsensometer with the above study.

Approved:

GEORGE E. ARMSTRONG
George E. Armstrong, M.D., Director

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